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THE CONFERENCE PAPERS.

No. 4. Purulent Fistulæ.

By Prof. J. J. O'CONNOR, M.R.C.V.S.

Mr. President and Gentlemen,

The condition known as a purulent fistula, or sinus, is very common in veterinary practice and sometimes difficult to cure. Consequently, I have chosen it as the subject of this paper in the hope that a good discussion thereon will bring out the latest and most efficient ways of dealing with it and thus prove instructive and helpful to the general practitioner.

The terms "sinus" and "blind purulent fistula" are synonymous, and either may be defined as a suppurating tract or cavity in which the process of cicatrization is interrupted by the persistence of pyogenic organisms in its depth which have a destructive effect on the tissues with which they are in contact and give rise to a constant purulent discharge, which helps mechanically in preventing closure of the cavity. The lesion is usually a sequel to an abscess which, after bursting or being opened, refuses to heal for the reason mentioned.

Most purulent fistulæ are "blind"—that is, in the form of a *cul-de-sac*, and this qualification is understood in my remarks.

ÆTIOLOGY.

Excessive movement in the part militates against healing of a cavity, but is seldom sufficient of itself to cause a fistula. Mechanical separation of the walls of a space prevents its closure, as may occur after excavation of a diseased portion of bone where the opposing surfaces are too rigid and too far apart to approach each other and favour the process of repair. This, however, seldom obtains in veterinary practice.

When a fistula has been in existence for a long time, its walls became callous and perhaps partly lined by epithelium, rendering them incapable of granulating unless inflammation is excited therein or the smooth surface is removed.

If infection were excluded as a causal agent of purulent fistula the condition would become very rare and would be easily dealt with.

The tissues always make an effort to overcome infection by the processes of inflammation and abscess formation—anything which checks this salutary re-action, or prevents its completely accomplishing its effect, acts as a cause of the trouble, for example:—

(1) *Feeble vascularity.*

Feeble vascularity of a part, whereby the bacteria are enabled to gain the upper hand locally and perpetuate a slow destructive process, which prevents healing indefinitely. Certain structures are normally poorly supplied with blood, viz., cartilage, tendon, and ligament, whilst others may have their normal supply diminished or cut off as the result of injury, causing vascular destruction or thrombosis.

(2) *General debility.*

Diminished resistance to infection may be systemic, the animal organism being unable to provide the necessary forces to combat the pathogenic microbes which have invaded the tissues; phagocytosis is not sufficiently active, or the anti-bodies are wanting or weak in action.

The patient, in such a case, while not presenting a debilitated appearance, may still have this inherent weakness.

(3) *The presence of necrotic tissue in the depth of the fistula*, which cannot be extruded owing to its being too far from the surface and confined by overlying structures. This is exemplified in poll-evil, fistulous withers, quittor, fistula of the jaw, etc.

(4) *The presence of an external foreign body.*

A foreign body may enter the tissues from the outside, such as a piece of wood or glass or shrapnel, or a septic ligature which, being septic, keeps up infection as long as it remains *in situ*.

(5) *Insufficient drainage from a septic wound or abscess cavity*, whereby the pus remains in contact with the tissues, exercising its destructive effect thereon. The absence of a dependent orifice is not essential for a clean operation wound, provided that it is protected from infection.

This is illustrated by the Perrier method of operating for quittor, in which a deep hollow wound is left after incision of the cartilage; also by the operation for poll-evil, after which drainage is not perfect.

In some cases, where pus has not a free exit, its liquid portion becomes absorbed and the solid matter becomes inspissated and assumes the form of concretions, which act in the same manner as external foreign matter in preventing cicatrization.

(6) *The presence of some specific lesion in the tissues*, such as that of tuberculosis, botriomycosis, strangles, actinomycosis, carcinoma, sarcoma, etc., communicating with the surface through a fistulous tract caused by the destructive effect of the disease.

Symptoms.

The symptoms of a blind, purulent fistula are familiar to every practitioner.

They consist of a more or less chronic inflammatory swelling, having one or more orifices from which pus constantly exudes. Although the condition may be of long standing and the affected tissues consequently callous, it may be quite painful, due, as a rule, to new areas of infection in the region causing acute inflammation and abscess formation. When the swelling is large it is a sign that the lesion beneath is extensive.

The suppurating orifice, when comparatively recent, may be in the centre of a mass of exuberant granulations or, when old, in the form of a funnel-shaped depression, with cicatrised edges and lined by epithelium which may extend some distance into the fistula. A probe passed through this opening will give an idea of the depth and direction of the passage, but the latter may be tortuous and branched and thus prevent the instrument from reaching its bottom. It may also serve to ascertain whether a foreign body or hard necrotic tissue is the cause of the affection. Liquid injected into the cavity will help to reveal its capacity and, in the case of more than one opening, whether the various openings communicate.

If the finger can be introduced to the extremity of the fistula, useful information may be obtained as to its nature. Scars or cicatrised spots may be observed representing openings that have closed and indicating that the lesion is not of recent occurrence.

In exceptional cases a considerable time, even months, may elapse before the secondary abscess matures and bursts to cause a recurrence of the condition which, in the meantime, was looked upon as cured, there being no inflammatory symptoms present to cause suspicion of latent infection. The recurrence of the condition is heralded by inflammatory symptoms of varying intensity, manifested at first by pain on pressure and stiffness in movement of the part, and afterwards by swelling as well. In the case of a large, deep-seated, acute abscess there might be a rise in temperature during its formation. A copious discharge from the fistula is a sign that there is extensive necrosis in its depth. Needless to say, function may be interfered with by the presence of purulent fistulæ in the vicinity of important organs, whereas if not so situated, they may cause little inconvenience to the patient. Affecting the limbs, they usually cause lameness, and located on the seats of harness they prevent animals working. Costal fistulæ and those occurring in the abdominal wall may only be eyesores, as they do not seem to incapacitate the subject in any way.

A horse may go sound for years with scirrhous cord, and a fistula of the jaw may persist for a long time without affecting mastication.

Prognosis.

Typical purulent fistulæ, such as poll evil, fistulous withers, quittor, etc., rarely heal spontaneously, although nature always makes an effort to effect a cure by the process of inflammation and elimination, and, were it not for these phenomena, the intervention of the surgeon would be of little avail, for, of course, he can only help nature in her wonderful work of repair. Cases of deep purulent fistulæ are always disliked by the clinician for the following reasons. The difficulty of ensuring that the cause of the condition is removed; the trouble and time required in trying to achieve this; and the tendency, after operation, for the wound to revert to its original condition unless very careful measures are adopted to prevent subsequent infection—and it is not always possible to insist on this being done. The duration of a case responding to treatment may be put at from two to eight weeks.

Treatment.

If the pathogenic bacteria in a fistula could be at once destroyed or rendered inactive, the lesion would heal, because the process of repair would then go on without interference. The main principle of treatment, therefore, is to counteract infection by local and general measures.

Local Treatment.

Local treatment comprises:—

(1) *Antiseptic irrigation.*

Provided that the fistulous orifice is dependent, the frequent irrigation of the passage throughout its entire course may arrest the destructive effect of the organisms and allow the tissues to effect repair. The particular agent employed is a matter of choice. If one has not the desired effect it is advisable to try another or it may be an advantage to use a combination of agents.

The following lotions are familiar for the purpose: Five per cent. carbolic acid; 1—1,000 corrosive sublimate; eusol, chinosol (1—500); lysol (two per cent.); creolin (two per cent.). Hydrogen peroxide is an excellent detergent as well as an antiseptic, but its effect in the latter capacity is transient. Its use is always indicated to clean a dirty wound.

It may be said that this form of treatment is usually disappointing when employed in the ordinary way, but, if thoroughly carried out by the Carrel tube treatment, it gives excellent results, judging from published reports, such as those of Captain Peatt, from Salonika.

(2) *Irritant or caustic injections into the fistula.*

These injections are germicidal, and, at the same time, more or less destructive to the tissues.

They might be objected to on account of the latter effect, but, whilst they cause some anatomical destruction, they also stimulate increased inflammatory re-action, which frequently acts beneficially by causing the separation of necrotic and callous tissue.

They arouse local defensive activity. To be effective they must come into direct contact with every part of the lesion. It is because this is not always possible that this method of treatment often fails. It is frequently necessary to enlarge the orifice of the fistula or partly open up its tract before introducing the injection. The following solutions have been successfully employed :—

1.—Perchloride of mercury (1—10 spirit).

2.—Chloride of zinc (10 per cent.)

3.—Copper sulphate (5 per cent.)

4.—Tincture of iodine.

5.—Liquor villati.

6.—Gamgee's liquid

Corrosive sublimata,	17
Alcohol	140
Hydrochloric acid	2—4
Acetate of lead	34

7.—Ammonia and turpentine liniment.

There is nothing better than perchloride of mercury as a germicide and as an escharotic for promoting the separation of dead tissue.

A syringe, preferably of vulcanite, with a long narrow nozzle, is generally required to force the liquid to the bottom of the diseased cavity.

This is a painful form of treatment, owing to the acute inflammation which it sets up, and is always resented by the patient.

(3) *The use of solid caustics*, which cause sloughing *en masse*, bringing about separation of the causal necrotic tissue as well as the callous lining, and leaving a granulating wound, which gradually cicatrizes. It is essential, of course, that the agent employed reaches the part of the abnormal passage where the cause of the affection resides.

The knife may have to be freely used to enable the caustic to be introduced into the recesses of the lesion.

The caustic may be in the form of plugs or pencils, powder or paste. The plug is convenient for pushing into the depth of the affected part.

Powder may be enclosed in a piece of blotting paper and then inserted, or a pledget of gauze or cotton wool may be moistened, or smeared with vaseline, and then rolled in the powder and packed into the fistula and left in position until it comes away with the eschar. The separation of the latter takes a variable time, generally about a fortnight for tendon, cartilage, or ligament, when a considerable thickness of the structure is involved. A seton, dressed with the powder and passed through the fistula, often proves efficacious. This treatment is sometimes spoken of as the coring treatment on account of the escharotic core which comes away.

It is a method which is usually successful when thoroughly carried out. Common examples of caustics used in this way are : Perchloride of mercury, chloride of zinc, copper sulphate, and arsenic. Perchloride of mercury is probably the most widely used, and is very efficacious. Arsenic is very drastic, but thorough in effect.

(4) *The use of the actual cautery.*

A red hot iron passed into the depth of, or right through a fistula, making a counter opening, often produces the desired effect.

It may be used in conjunction with a solid caustic, the combination of the two forms of treatment being more effective than either form alone. The actual cautery sterilizes septic tissues and makes room for the potential caustic which remains *in situ* and increases the effect of the iron. A local or general anæsthetic should be administered before using this instrument.

All forms of cauterization must be used with caution in the vicinity of joints, large tendon sheaths and body cavities, for fear of causing sloughing into them and consequent inevitable infection thereof, with fatal results.

(5) *The application of a blister.*

The application of a blister to the affected region has the effect of increasing hyperæmia and stimulating phagocytosis, and in this way helps recovery. It may be sufficient to bring about cure, apart from other measures, in the case of a superficial or shallow fistula. It is always indicated when the part seems indolent and slow in the work of repair, even after surgical intervention. Applied to the lining of a fistula, it excites inflammation and consequent granulation and cicatrization.

Biniodide of mercury, 1 to 8, is very suitable in this respect, being a reliable antiseptic as well as a good counter-irritant.

(6) *Bier's hyperæmic treatment.*

Bier's hyperæmic treatment is suitable when the lesion is situated on a limb at a place where a bandage can be applied above it. An indiarubber or crêpe bandage is put on as far above the affected part as possible, sufficiently tightly to arrest the venous, but not the arterial circulation. Some care and experience are required to ascertain the right degree of tightness for the bandage and the duration of its application. It should not cause pain or much swelling. When the patient becomes uneasy from its pressure it should be gradually relaxed until it is tolerated by the animal. Two to four hours daily is the usual duration of the treatment. It causes the part to become congested with pure blood which flows in through the arteries, causing active phagocytosis and the outpouring of serum containing anti-bodies which neutralise the action of bacteria and their toxins. If the method is not properly supervised it may cause disappointment. A piece of rubber tubing may be used like a tourniquet, care being taken to have a layer of cotton wool and an ordinary bandage beneath it to prevent its marking the skin by causing superficial necrosis, which, however, is only likely to result when the band is left on too long. Whether used alone or associated with other measures, this mode of treatment is always beneficial and should be more widely practised for septic lesions of the feet and lower parts of the limbs.

(7) *The use of a culture of the Reading bacillus.*

A culture of the anærobic organism, the Reading bacillus, introduced into the fistula, causing the diges-

tion of necrotic tissue and having no pathogenic effect, should prove very beneficial.

Its action is characterised by the production of a copious fœtid discharge from the affected part.

The author has had no experience of its use.

(8) *Filling the fistula with bismuth paste, viz.*, bismuth subnitrate, 120 parts, vaseline 240 parts, white wax 20 parts, paraffin 20 parts, at 45°F. and injected with a warm brass syringe. This method is said to have given excellent results

(9) *Surgical interference.*

Surgical interference is the most satisfactory form of treatment, as it is the only way to make sure of exposing completely the seat of the disease and thus facilitating dealing with it on rational lines. There is no very special procedure for the purpose.

The idea is to partly, or completely, open up the suppurating tract or tracts to enable necrotic tissue, concretions or other foreign matter to be reached and removed and to provide for drainage.

Details of procedure.

Details of procedure for an extensive fistula may be given as follows:—

(1) Prepare the patient in the usual way and have it fasting on the morning of the operation.

(2) Prepare the skin in the vicinity of the lesion over an area where the knife may be used, by clipping shaving, and rubbing in tincture of iodine.

(3) Have the following instruments and dressing materials ready:—

1—A stout sharp pointed curved bistoury.
2—A strong blunt pointed concave bistoury.
3—A Syme's abscess knife.
4—A long, strong blunt-pointed scissors.
5—Two ordinary retractors.
6—A sharp pronged retractor.
7—A long, flexible probe.
8—A blunt metal sound.
9—A gum-elastic horse catheter (often useful for a long passage to serve as a sound).
10—Two curettes.
11—A sharp chisel and mallet } For
12—A trephine } operations
13—A sharp saw } on bone.
14—A sharp-pointed seton needle.
15—A stout needle, with a handle.
16—A couple of stout ordinary needles.
17—Suture and ligature materials.
18—Strips of calico or tarletan to serve as setons to keep openings patent.
19—Gauze, cotton wool, tow.
20—A stable rubber or calico cloth with a pad of cotton wool covered with gauze sewn to it to cover the wound after operation on fistulous withers.
21—Vessels containing antiseptic lotion for mopping and for the operators' hands.
22—A wound syringe.
23—Tincture of iodine, "B.I.P.P.," or other antiseptic agent for the wound.

(4) Cast the patient in a suitable position and administer a general anæsthetic.

(5) Taking careful aseptic and antiseptic precautions, examine the lesion and probe it to ascertain its depth and direction. It is also advisable to flush it out with an antiseptic lotion or irrigate it with tincture of iodine.

(6) Open up the orifices for a short distance to expose the interior of the passage and facilitate further exploration; make incisions as far as possible parallel to the long axis of the part. Open up short tracts throughout their entire length and long ones for the greater part of their course at both extremities.

(7) Arrest hæmorrhage as far as possible.

(8) Pare out the fibrous lining of the fistula and its branches, to enlarge their lumen and provide room for their thorough examination, to remove necrotic tissue attached thereto, to relieve tension and to facilitate drainage and dressing. The sharp-pronged retractor is very useful for this purpose, enabling you to get a good grip of the lining, evert it, and hold it in a convenient position for using the knife.

(9) Make sure you get to the bottom of the lesion to expose the chief seat of the disease—necrosis of tendon, cartilage, ligament or bone, ulcerated bone or cartilage, or an external foreign body, or inspissated pus. Completely excise diseased tissue. A sharp chisel may be used to cut away a piece of ulcerated bone or cartilage, but a sharp curette is generally more suitable to scrape it until a healthy pink bleeding surface is left.

The sharp saw is useful to remove a diseased process of bone, such as an ulcerated side-bone or vertebral spine or great trochanter of the femur, etc.

The trephine is convenient for the excision of a small area of ulcerated bone on the lower or upper jaw, or on the scapula or other bone. A gouge forceps with sharp jaws may be used for the removal of pieces of necrotic cartilage from the summits of the dorsal spines in a case of fistulous withers. Great care must be taken that no branch of the fistula is left unexplored and that no unhealthy or septic tissue is left *in situ*.

It is a mistake to try and do this through small wounds. It is better to make big gashes, although one hesitates to do so sometimes; they look so awful. The delay caused by the healing of such wounds is seldom a source of worry to the practitioner. The annoying feature of the cases under consideration is their refusal to heal after operation, owing to some septic tissue remaining in position or to re-infection occurring during or subsequent to the operation, necessitating renewed intervention.

It is important, also, not to make unnecessary wounds or break down spaces between muscles, making cavities where blood may accumulate and favour suppuration.

It is not necessary to remove all the fibrous lining of a cavity to obtain healing, for even though it may have a smooth surface it always becomes inflamed after operation, granulates, and cicatrizes, provided that infection is overcome. It is well to bear this in mind when operating in the vicinity of important

vessels. The application of tincture of iodine or other irritant to such a surface will favour this inflammatory reaction. All deep spaces must be drained by counter openings and the latter kept patent by setons passed through them.

Bleeding during the operation hampers the operator in examining the lesion and ensuring complete excision of unhealthy tissue. In a case where tdere is doubt in this respect it may be well to cast the patient again in the course of a few days and examine the field of operation, to see if further intervention is necessary.

Whenever a suspicious spot appears in the wound some days after operation it is often sufficient to cauterize it—to cause its separation and produce a healthy surface. This is preferable to operation, if it is sufficient, for it does not involve the risk of re-infection as is the case when the knife is used.

The use of a caustic on the occasion of the operation might be beneficial in bringing about the elimination of any unhealthy tissue that might be left after operating, but the bleeding generally interferes with its application and might cause it to overflow from the wound, and perhaps cause death of the surrounding skin. The hot iron may be employed to arrest hæmorrhage and sterilize the wound, but it is a very destructive agent and would be too severe to apply over an extensive surface.

(10) Having completed the surgical procedure, irrigate the wound with a reliable antiseptic lotion, using considerable force with a syringe to flush out debris and to reach the remotest parts of the cavity. It is a good plan to swab the wound with tincture of iodine, as it is penetrating, stimulating, antiseptic and anti-toxic. Then pour "B.I.P.P." (*i.e.*, bismuth subnitrate 1 part, iodoform 2 parts, and liquid paraffin q.s., to make a paste or thick fluid) into the cavity, or pack it, if not too extensive, with boric acid (1 oz.) and biniodide of mercury (10 grains). Arrest the hæmorrhage by plugging the wound with gauze, wool, or tow, saturated with "B.I.P.P.," or impregnated with antiseptic powder, and kept in position by sutures in the skin. Gauze is the best material for the purpose, as no particles of it are left in the wound. "B.I.P.P." is undoubtedly the best preparation for maintaining the wound free from infection. It gravitates into its recesses and remains there for days.

(11) If practicable, it is advisable to protect the operation wound by a sterilized pad and bandage, until granulations are formed and it is in a position to resist infection. A stable rubber, or similar cloth, with a pad of cotton wool covered by gauze sewn to the cloth at the periphery of the wool can be fixed over the withers by the aid of the roller and a string round the neck. A simpler and fairly effective way of protecting the wound where a bandage cannot be applied is to smear vaseline on the skin round the wound and then cover the latter with a very thin layer of cotton wool, fixed in position by adhesion through the medium of the vaseline. A thick layer will not remain in position.

(12) Put the animal in a hygienic stable and give it the usual hospital diet.

(13) On the day following the operation, remove the plug, if one has been used, and irrigate the wound with an antiseptic lotion, such as eusol, and dress with "B.I.P.P.," or a mixture of boracic acid and iodoform, or boric acid and biniodide of mercury, or boric acid and potassium permanganate, insufflated by blowing it through a piece of hose piping, and re-apply the protective covering if one has been used. An advantage of "B.I.P.P." as a dressing is that it does not require daily renewal. When it is used, redressing may be deferred for days. Otherwise daily dressing for large wounds is indicated for a while.

An alternative form of after-treatment is to practice almost constant irrigation of the wound by the Carrel tube method. Normal saline solution may be used instead of an antiseptic liquid in this method. It causes an outflow of lymph which is anti-toxic and antiseptic and is not injurious to the tissues. It has often been employed with excellent results. When the wound becomes uniformly covered with granulations it is only a matter of time for it to cicatrize and then lotions are unnecessary, if not contra-indicated, as they serve no good purpose, but, instead, tend to make the granulations soft and exuberant and easily broken.

Healthy granulations should not be disturbed so as to make them bleed, for, by so doing, an opening is made for infection which may ensue and retard the healing process. If the whole of the wound is not within view it is hard to say whether it is granulating throughout, and it is better, in such a case, to continue the antiseptic lotion, lest there might be a part where there is still infected tissue to be cast off. Lotions will never be so harmful as to prevent healing. If infection is overcome, cicatrization is bound to follow. "White lotion" has an astringent and apparently beneficial effect on a granulating wound, acting like an antiseptic powder, which is a very suitable topic for a granulating surface.

The Bier's treatment, or a blister, may be used to accelerate cicatrization.

General Treatment.

General treatment includes:—

1.—Good hygiene, comprising generous and laxative diet, grooming, gentle exercise, if not interfering with the lesion, good ventilation and clean surroundings.

2.—The administration of such laxative, eliminative medicine as seems indicated.

3.—The use of slings for a debilitated subject.

4.—The administration of tonics or drugs believed to have a specific action. Arsenic may have a beneficial effect, and potassium iodide is said to have an inhibitory influence on pyogenic bacteria. Nuclein ought to have a good effect.

5.—Serum therapy, *i.e.*, the injection at intervals of a polyvalent serum, antagonistic to the organisms infecting the tissues.

6.—The use of a polyvalent or autogenous vaccine, which may so exalt the power of resistance of the patient that the infecting bacteria are rendered innocuous, and uninterrupted cure of the case follows,

even without operation. This happy result, however, does not invariably ensue.

A stock vaccine may or may not have a good effect.

Phylacogers, sterile aqueous solutions of metabolic substances, generated by bacteria in media—provide at once the necessary stimulus to the production of an increased number of leucocytes and anti-bodies, and are, therefore, indicated in purulent fistulæ, caused by organisms of a correspondig strain.

Biological therapy is always advisable, in conjunction with surgical treatment.

Discussion.

Professor W. M. Mitchell (Edinburgh) opened the discussion. He said the feeling he had had in coming there was that it would not be long before the National Veterinary Medical Association would have to consider the question of sectional meetings. They were coming to a position in the profession in which they were beginning to branch out into different lines. Some were especially interested in medicine, some in surgery, and some in public health. From the surgical point of view, he thought there would be a better chance for many of them to bring along little things, and discuss their particular difficulties. Of course, if the meetings were held at the same time there might be a certain number which they might miss, but still it would tend to intensification of study. He did not intend to go over Professor O'Connor's paper *seriatim*, but he wanted, if possible, to concentrate his remarks upon a condition which he had met fairly frequently in the last year in the dog. While not proposing to criticise Professor O'Connor's paper, he did feel that there ran through it the strain of the horse the whole time. Now, operations on the horse, to his mind, were limited to a much greater extent than in the dog, and therefore he came to what he considered the animal in regard to which there was going to be greater scope for the surgeon in the future; and it undoubtedly was the case now. The question to which he wished them to direct their attention was a condition which he had met with in the last twelve or thirteen months, namely, fistulæ in the cervical region in the dog. Professor Mitchell said he had brought down records of about ten cases. He gave particulars of two of them, and by means of a preserved specimen illustrated what had occurred in one of them, remarking that many *post-mortems*, he found, were much easier when the animal was preserved. The condition, he said, occurred usually in dogs about a year or two years old; it was not a condition apparently affecting old dogs. Discussing probable causes, he said he hoped that, by putting the specimen before them, he might get some information which would enable him to understand the case. As a result of following it out, he thought the outlook for them was very poor. No doubt they would get cases in which they could operate, but he was afraid the fistula would return.

Mr. Rabagliati gave some of his war experiences in the treatment of camels, remarking that of all their veterinary patients, the camel was most prone to fistula. Such cases were, perhaps, the most difficult and most unsatisfactory with which they had to deal. Indicating the forms of fistula met with in the camel, he mentioned fistula of the sternal pad, adding that this was very difficult to treat. Professor Mitchell mentioned a very interesting fact when he said he put great stress on the condition of the fascia. He thought no animal had such a fascia covering the muscles as the camel, and that this led to a number of abscesses which would not occur in other animals. They tried putting in arsenic and corrosive sublimate, and also actual firing—a native remedy—but what they found most satisfactory, when practical, was to open out the wounds by surgery, cutting out the diseased tissue, and they found that when they could get decent drainage, the cases did very well. Dealing with a large number of native dressings, as they had to do, they noticed what a great tendency there was to use antiseptics too strongly. A great deal of harm was done by all antiseptics of too great strength. They found saline solution was extremely useful, and about the best method of treatment once the wound was thoroughly cleaned.

Mr. W. R. Davies said Professor O'Connor had told them that the sinus was due to an abscess which formed and burst and showed no tendency to heal. That was the case, no doubt, but although in a good many cases the causes of the formation of the abscess might be obvious, in the case of fistulæ the cause was by no means apparent. A class of animal particularly subject to bruises and wounds was pit ponies, and one would think that, if it was an abscess which gave rise to the fistula, these pit ponies would furnish a great number of instances of fistulous withers. As a matter of fact, however, they found it very rare—not one case in a thousand. Another curious thing was that they very rarely found fistulous withers in horses used continually in town work and that had not been turned out to grass. On the other hand, on little farms, where they had perhaps four to six horses, he had seen three cases of fistulous withers on one farm. There must be something to account for the difference. Then, again, how rarely they found it from sore backs. They got dreadfully sore backs where horses were neglected, but they seldom found fistulous withers connected with them. With regard to treatment, he agreed that the proper thing to do was to chloroform the animal, and interfere surgically. There was no other thing. The employment of escharotics or the use of the hot iron was not to be compared in point of efficacy with interfering surgically. He thought it was important to consider the position of the incision. He believed the proper place to make the incision was in the middle line in every case. They got a better view of the tissues; they could determine whether both sides were affected or only one, and they could deal with it much more expeditiously. He did not believe they should wash out the sinus before putting in B.I.P.P. He did not believe in washing; the less

water they put near the fistula the better. In any case, he thought Professor O'Connor had hit on a right remedy in B.I.P.P.

Mr. L. PUGH and Professor WHITEHOUSE continued the discussion.

Mr. DAVIES asked Professor O'Connor if he had ever seen a case of congenital fistulous withers, relating that a thoroughbred foal born on a Sunday was noticed on Monday morning to have two little holes, one on each side of the neck, discharging pus. It was treated for a month before he was called in, and when he was, there were two typical sinuses. On probing down about six inches on one side and four inches on the other, he felt convinced that the foal must have been born with them.

Mr. H. ELPHICK alluded to Professor O'Connor's reference to blisters, and said that when he was a boy blisters were only applied over withers. Those withers were invariably operated upon afterwards. They had to be operated on. Whether it was due to the blister making the thing worse or not he could not say, but in his later years he thought he would dispense with blisters in these cases, and he was sure that, although an operation had been necessary, the operation had been much more often successful. Hydrogen peroxide was a very efficacious dressing, but care must be taken that it was not too strong. He mentioned a case he experienced in the army of big swollen withers, with no pus at all; they got no pus until after operation, and then there was plenty.

Mr. BROOKE, Mr. HEASLEY, Major CHAMBERS and Professor HOBDAY also spoke.

THE REPLY.

Professor O'CONNOR, in reply, said his first duty was to thank the members for the kind way in which they received his paper. He was very interested in Professor Mitchell's cases of fistulæ in the dog, abutting on enlarged lymphatic glands, and the excellent specimens illustrating them which he exhibited. He (Professor O'Connor) had had several similar cases of enlarged lymphatic glands in the cervical region in the dog, unaccompanied by fistulæ and a few cases in which fistulæ were present, and his opinion was that the fistulæ were due to infection of the enlarged glands following traumatism. He recollected one case in a blue terrier with an enlargement almost as big as the fist, in the left parotid region, and having a suppurating passage in its centre. He removed the swelling, and the wound healed. He saw the dog some months afterwards, when there was no sign of recurrence of the condition. He recalled other cases in which he cured fistulæ in the dog in connection with lymphatic glands by excision of the latter, but in those instances there was not marked increase in size of the glands. Recently he had under treatment an Irish terrier with fistulæ in connection with the right inguinal and popliteal lymphatic glands. The wound following excision of the inguinal gland healed permanently, but that in the popliteal region remained fistulous—due, perhaps, to some unhealthy tissue being left *in situ* by the student who operated. The specimens shown by Professor Mitchell were too diffusely affected to be successfully operated upon. The condition appeared to be a chronic adenitis. He was very glad to meet his former pupil, Mr. Rabagliati, after so many years, and to hear his description of the very interesting cases of fistulæ in camels. He agreed with Mr. Davis that some cases of poll-evil and fistulous withers could not be traced to traumatic origin, and probably most of them were in country horses. Once the lining of the cavity became healthy, it was certainly better to avoid the use of lotions. He had never seen a case of congenital purulent fistula in a foal, but he recollected an instance of a sinus in a three months old, valuable thoroughbred foal, on the near shoulder, extending downwards for about six inches and terminating in the jugular furrow. The origin of the case was obscure. It was noticed when the dam came home from the stud farm. The orifice only admitted a probe. He opened the fistulæ to its extremity, and found it contained hard impissated pus in the form of numerous concretions, and was lined by fibrous tissue. If it was not congenital, it must have formed soon after birth. There was no history of an injury. He dissected out the fibrous tissue, except the portion covering the jugular vein. He directed the wound to be dressed with tincture of iodine until granulations formed; when dry dressing only was to be employed. The wound healed without hesitation, and the colt was sold as a yearling at Doncaster for 2,000 guineas. For poll-evil he made the incision in the middle line, but for fistulous withers he preferred to make it just to one side of the middle line, as the wound would gape less than in the other situation over the prominent spines, and yet would permit of their summits being operated upon.

He could not give Mr. Pugh any further information regarding interdigital cysts. His method of treatment was to partly excise them and cauterize the remaining portion of their lining with silver nitrate.

Mr. Elphick spoke of a blister as favouring hæmorrhage during subsequent operation and militating against recovery. He (Professor O'Connor) did not recommend its application prior to operating on a deep-seated fistula, but considered it beneficial for a superficial one or to stimulate inflammation and consequent repair when the healing process was slow after operation. He recommended hydrogen peroxide as a good agent for cleaning a dirty fistula. With regard to antiseptic applications, he had no great faith in any particular agent, as he thought one was as good as another, provided it was properly applied.

He thoroughly agreed with Mr. Brooks that the essential point in the treatment of fistulæ was to get to their bottom, so as to expose and remove the cause of the trouble.

He was of the same opinion as Mr. Heatley that sternal fistulæ was often very difficult to deal with.

Major Chambers' remarks on cases on the farm were interesting. Setons were very useful for keeping orifices and passages patent after operation. They might also be serviceable for the purpose of introducing a caustic into a passage, keeping it in contact therewith.

He had met with cases of anal fistula in the dog, and he remembered one in an old retriever, which extended deeply into the pelvis. When the probe was passed into it without undue force it entered the peritoneal cavity. The patient died a couple of days afterwards. He believed the condition was due to carcinoma in the perirectal tissue, which was considerably thickened. A microscopic examination was not made to verify this. The passage of the probe, in his opinion, hastened death, although there was no distinct evidence of peritonitis on *post-mortem* examination. It might be inferred from the trend of the discussion that all the speakers agreed with his own views on the subject of the paper.

R.C.V.S. Fellowship Examination.

The examination for the Fellowship Diploma was held at the R.C.V.S., 10 Red Lion Square, W.C., on September 25th, when the following candidate was successful: Major D. S. Rabagliati, O.B.E., B.Sc., M.R.C.V.S. The subject of the thesis was "The Examination of the Camel for soundness, with special reference to its Dentition." The examiners were Messrs. J. A. W. Dollar and J. MacQueen, with Mr. W. J. Mulvey as chairman.

Production of Venice Turpentine.

The production of Venice turpentine (trementina) in Italy is confined to the Province of Venetia Tridentine, formerly Austrian Tyrol territory, in the northern part of Italy. In this region that species of pine known as larch is found in abundance on the slopes of the Apennines, and the distillation of turpentine from the wood of this tree forms an important industry. There seems to be no monopoly of the industry as, according to the *Journal of the Royal Society of Arts*, quoting a United States' Consular report, the production of Venice turpentine (known to the producers as ilio greggio di larice or Tyrol larch turpentine) is divided among a great number of individuals and small concerns. In some cases the municipal government owns and operates distillation plants for the production of turpentine—an unusual occurrence in Italy. Venice or Tyrol larch turpentine is sold by weight. —*Pharmaceutical Journal.*

The Denbighshire County Council have adopted the following resolution: "That in the opinion of this Council the time has arrived when the University of Wales should give consideration to the importance of providing facilities in the Principality for the fuller training of students in veterinary medicine."

The Veterinary Record.

29th September, 1923.

National Veterinary Medical Association of Great Britain and Ireland, Limited.

Cheques should be made payable to the Acting General Secretary at the Offices of the Association, 12 Buckingham Palace Road, S.W.1.

N.B.—Members receiving this paper in a brightly-coloured wrapper will please understand that their subscription is already overdue, and should be forwarded at once to the above address.

THE SIGNIFICANCE OF STATUS.

The suggestion concerning the desirability of parliamentary representation for the profession which was contained in the ex-President's address at York has gained in point from two recent and glaring examples of the unsatisfactory position in which the profession is placed in regard to legal status. The Congress was itself concerned with the first of these, and both indignation and astonishment were expressed at the revelation of the anomalous position of the veterinary surgeon in regard to the fees to which he is entitled as a professional witness. To us it is a striking comment both on the indifference displayed to a grievance of long standing by the Veterinary Powers that be and on the urgency of dispelling that indifference, that the R.C.V.S. had to secure eleventh-hour legal instruction as to the true, and truly deplorable, state of affairs.

At a divisional meeting of the National the complaint was made that a member had perforce to accept 16s. 6d. for a day's attendance at Court. A resultant letter to the Royal College elicited the information that it had been ascertained that ours is not one of the two professions covered by the special rule which entitles its members to a three-guinea fee when acting as expert witnesses. With the securing of that belated legal ruling the matter was apparently to lie. But, if there is any implication in this inaction that such a question as this lies peculiarly within the province of the "National," that body has already shown itself more than ready to step into the breach. The profession will be gratified to know that the National is moving in this matter in the absence of any hint that an attempt would be made from Red Lion Square to alter the veterinarian's status as a sixteen-and-sixpenny witness.

The second sidelight upon the inadequate recognition accorded us by the law was thrown at last week's meeting of the Mid-West and South Wales

(*Continued at foot of next page*).

Clinical and Case Reports.

The Editor will be glad to receive from members and contributions to this column of reports of interesting cases.

Hæmorrhagic Septicæmia of Cattle?

By C. Machattie, M.R.C.V.S., D.V.S.M.

Regarding the articles in the *Veterinary Records* of August 11th and September 15th, 1923, on so-called Bracken Poisoning, I give below an account of two cases which have come before my notice during the present month, and which would appear to correspond in some respects with those described by Mr. Jones.

Case No. 1.—On September 10th, 1923, I was called to see a nine months old calf, which, however, died before my arrival. The animal was first noticed to be ill that morning, and death occurred within six hours.

The carcase was normal, but for the presence of a crepitant swelling over the laryngeal region; there was no sign of diarrhœa, and fæces passed just prior to death were of normal consistency and colour.

Examination of blood smears and of material from the throat lesion proved the non-existence of anthrax.

The subcutaneous tissue of the intermaxillary space and over the anterior third of the trachea was gelatinous, and showed blood extravasations up to the size of half-a-crown.

Larynx and Trachea contained a quantity of blood-stained fluid.

Lungs.—Hyperæmic.

Rumen.—Distended, with ingesta too macerated to be recognisable; mucous membrane was healthy.

Abomasum.—Mucous membrane congested, and showed several inflammatory patches.

Mesenteric Lymph Glands.—Swollen and hæmorrhagic.

A walk through the field on which this animal had been grazed showed it to be bare of grass, but growing an abundance of bracken.

Advised removal of remainder of cattle in field.

Case No. 2.—On September 12th I was again called to a yearling, which had been on the same field as Case No. 1.

Symptoms.—Throat swollen, breathing laboured, marked roaring, saliva dropping from mouth, temperature 106·5°F., fæces normal.

Treatment.—Internally, linseed oil along with sodium salicylate, liq. ammon. acet. and infusion gentian co.; ½lb. mustard was applied to throat swelling. Next day the animal was markedly improved and is now apparently normal.

The above outbreak occurred in a district where several cases of bracken poisoning have occurred from time to time; these all showed a high temperature, diarrhœa, with the passage of strings of clotted blood, marked depression and early death; but the well marked throat lesion, the complete absence of diarrhœa and the readiness with which the condition responded to treatment would suggest that this condition falls in a different category from the usual so-called Bracken Poisoning.

Brachial Paralysis.

By J. Kerr Calderwood, M.R.C.V.S., Clitheroe.

Subject.—A heavy mare.

History.—She was grazing in a field, in which there was an old quarry fenced off. The usual thing happened, the mare breaking through and getting on to a narrow ledge which gave way, precipitating her into the bottom from a height of about 40 feet. Next morning, when the stock was looked round, the mare was standing in the bottom of the quarry, and hobbled out into the field, where an examination was made. I saw her a few hours afterwards, when she was grazing quietly, the limb having taken the position shown in the photograph. There were a

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Division. Mr. Scott's resolution urged a repetition of the efforts made to secure the exemption from jury service of veterinary surgeons. Here again, in the words of the mover of the resolution, "... the State, in failing to recognise our claims in this matter, casts a direct slur upon our *locus standi*."

No strongly-organised, important and (as we are, in just that special sense which applies to the medical profession) independent body of men need or should accept without both protest and action insults such as these. It is representation in the councils of the nation, and more particularly in Parliament, which will bring into being that essential cycle—a voice in affairs, an elevation of status, and an ability to act. For us, significance of status lies in its power to procure public acceptance of the doctrine that veterinary surgeons have a professional birthright in legal usage and recognition on a par with that of the doctors and lawyers.

Increase in status will be achieved by improved organisation amongst ourselves and by securing a foothold in that assembly which has never failed to give full recognition to the rights of those professions which have gained official representation therein.

Abstracts and Reviews.

Ovine Hæmorrhagic Septicæmia.

The authors draw attention to the loose manner in which outbreaks ot disease have been diagnosed as hæmorrhagic septicæmia in recent years.

The disease broke out among a batch of 3,000 lambs. They had been moved a journey occupying eight days. Within a few days a few were noticed to be ill. Discharge from the nose and crusted lips were the most noticeable symptoms. Within the first fortnight some 200 were ill and 50 had died.

Many of the carcases sent to the experimental station for examination showed consolidation of the lungs. Hæmorrhages were shown by a smaller proportion. Gastritis and enteritis were seldom seen, and scouring was not a noticeable symptom. The disease continued for a further week and the total number of deaths was 116.

Some sick lambs were penned with 2,000 other lambs which had been received about two weeks previously, and as far as could be determined the disease did not spread to other lambs. Thirty-four rabbits were inoculated with tissue emulsions from the same number of lambs and in 32 instances a bipolar organism was obtained in pure culture from their blood. The two rabbits which did not yield cultures survived the inoculations. The remainder all died within three days.

[Newsom (I. E.) & Cross (F).. An Outbreak of Hæmorrhagic Septicæmia in Sheep.—*Jl. Amer. Vet. Med. Assoc.* 1923. Mar. Vol. 62. No. 6. pp. 759—762. *Ex. Trop. Vet. Bull.*]

A Foot-and-Mouth Complication.

The occurrence of cardio-pulmonary disturbances as sequels to foot-and-mouth disease has already been placed on record by Hamoir.

The author has noted that certain animals after they have apparently recovered from foot-and-mouth disease begin to waste and after about a month or two a progressive breathlessness sets in, and actual spasms of suffocation may be seen. After a time affected animals present a peculiar appearance in that no matter what the season be the animals' coats are thick as in winter. This, the author thinks, is characteristic of the disease.

Contrary to what was observed by Hamoir, Robert has been able to devise a simple and effective method of treatment.

Whatever the time of the year the animals are clipped all over, and this alone effects a great improvement in their condition, and are then treated with strychnine, sulphate, veratrine sulphate and brandy.

In milch cows in which milk has been suppressed a return of secretion occurs and increases until it approaches the normal.

[Robert (M.). Sur une complication de la fievre aphteuse. (A Complication of Foot-and-Mouth Disease.)—*Rev. Veterinaire.* 1923. May. Vol. 75. No. 5. pp. 290—292. *Ex. Trop. Vet. Bull.*]

Post-Bite Rabies Infection Prevention.

This paper contains an account of experiments carried out with a view to ascertaining whether dogs previously inoculated with rabic virus can be protected against infection.

The method selected was that of Marie, a method involving the use of a large dose of fixed virus, which has been exposed to the action of antirabic serum for 24 hours, followed after an interval of a fortnight by a large dose (about 5 gm.) of fixed virus alone. The dogs used were kept under observation for some months in order to eliminate the possibility of natural infection. They were then inoculated by two punctures into the lip (resembling natural bites) with street virus. Half of the dogs, 18 in number, were left as controls, and the other 18 were treated with the serum virus mixture three days later, and with street virus a fortnight afterwards.

One of the controls died of gastritis and of the remaining 17 seven died of rabies.

Of the dogs subjected to the protective treatment five died. In three instances rabies was diagnosed clinically and microscopically, but in two of these cases inoculation failed to cause infection in rabbits. The other two dogs died of enteritis, and their brains were negative on inoculation.

It is concluded that the serum-virus method may prevent the development of rabies provided there is no excess of serum and a considerable dose of vaccine is used. The inoculation is not without risk. An objection to it is that it must be carried out at an Institute where rabies work is done, and also it is against the method that absorption is very slow and septic conditions are likely to make their appearance.

Toxic effects are likely to be produced either by the virus or by the heterologous brain tissue.

[Vallee (A). & Rinjard (P.). Recherches sur la prevention de la rage du Chien apres morsure (The Prevention of Rabies in the Dog after having been Bitten.)—*Rev. Gen. Med. Vet.* 1923. Apr. 15. Vol. 32. No. 376. pp. 165—174. *Ex. Trop. Vet. Bull.*]

(*Continued from previous page*).

few scars on the head and body, but none of any consequence. No fracture could be found, and the case was diagnosed as Brachial Paralysis.

There is no particular pain, but when the knee is pushed back into a natural position there is inability to support weight. As the mare can get up and down without difficulty, she is being kept in the pasture for the present, and the usual stimulating liniments applied. Merillat (*Veterinary Surgical Operations*) mentions two methods of fixing the limb, but these in this case are not practicable.

I saw two or three of those cases during the war, but I think this is the first I have recognised in private practice.

Association Reports.

Western Counties Division.

The summer meeting of the Western Counties Division was held at the Seale-Hayne Agricultural College, Newton Abbot, Devon, on Tuesday, July 10th, 1923, by the kind invitation of the Principal and Board of Governors.

The college stands in a delightful spot in the Ashburton Division of Devon, and was founded under the will of the late Right Honourable Charles Seale-Hayne, M.P., who was intimately connected with the district up to the time of his death, 1903. Besides the endowment under the will of the founder, annual grants towards the expenses of the college are made by the Ministry of Agriculture and Fisheries, and the counties of Devon and Cornwall. This arrangement allows of a thorough instruction in agricultural science at considerably lower fees, and provides for resident students from Devon and Cornwall at practically a nominal sum.

The members attending thoroughly enjoyed the inspection of the college buildings, particularly the technical block, consisting of agricultural, chemical, botanical, veterinary and other departments, each with its own laboratory, lecture and store rooms; the impression being that it was a magnificent building with everything up to date, and every facility present for turning out good and scientific farmers.

The Principal, Col. D. R. Edwardes-Ker, O.B.E., M.A., B.Sc., in a short address of welcome, stated:—

"Of eighty students of the Seale-Hayne College, approximately thirty are from Devon, twelve from Cornwall and the remainder from other localities. There are also students from Siam and Egypt. There is a good proportion of farmers' sons, and special fees at less than half terms are available for nominees of the Devon and Cornwall County Councils. The main courses are the three years' diploma course, and the two years' course for the farm certificate, while the short course of two terms' duration is held from October to May.

The curriculum includes the study of crops, stock, manures, soils, surveying, drainage, agricultural chemistry, agricultural botany, book keeping, etc., and the college has been particularly successful in preparing the students for external examinations. At the last examination for the National Diploma in Agriculture, the Seale-Hayne College secured more passes than any other agricultural college or similar institutions in England.

The building of the Seale-Hayne College was completed in 1914, and the first students were received in 1920. The founder, Mr. Seale-Hayne, who left the whole of his fortune to the college, was for many years Member of Parliament for the Ashburton Division, in which the college stands.

Lunch was served in the dining hall at 1-15 p.m., the Principal and his wife also being present, and several members of the teaching staff. After lunch the members inspected the dairy, farm buildings and stock, and were greatly impressed by the up-to-date cow shippons, built on hygienic principles, and it was pointed out to them that though no licence was held by the college to produce Grade "A" milk, nevertheless it was produced there, and weekly counts carried out.

After inspecting the stock, where the members were much impressed by the fine flock of Suffolk sheep and Suffolk crosses, the members returned to the library, which was suitably laid out for the meeting.

Business Meeting.

The President, Mr. G. D. Lansley, Axminster, took the chair promptly to time, and the following members and visitors signed the attendance book:—

Messrs. W. B. Nelder, Exeter; W. G. Blackwell, Exmouth; C. G. Hearn, Kingsteignton; R. B. Nelder, Exeter; F. Short, Torquay; H. K. Roberts, Sampford Peverell; W. N. Wright, Torquay; C. Masson, Torquay; R. Ferries, Totnes; W. P. Stableforth, Honiton; and the Hon. Secretary.

Visitors.—Col. D. R. Edwardes-Ker, Messrs. T. R. Shaseon, H. M. Chilland, J. J. Shaw, J. F. Codd, A. C. Caunerwell (Burma), L. Norman, C. Saunders, E. V. Wakeham, R. A. de la Mare, A. S. Webber, L. Gyles, F. Northcote, and A. W. Stableforth.

The notice convening the meeting was read, and the minutes, having been published, were taken as read and confirmed, on the proposition of Major Wright, seconded by Mr. C. Masson.

Correspondence.—Apologies for absence were received from the following:—Messrs. W. Penhale, Holsworthy; S. G. Motton, Penzance; E. R. Edwards, Exeter; C. Crowhurst, Bodmin; W. Ascott, Bideford; E. Dunstan, Okehampton; W. L. Richardson, Wadebridge; E. Bovett, Bridgwater; H. James, Sidmouth; C. Golledge, Sherborne; F. T. Harvey, St. Columb; W. Roach, Exeter; W. Wintle, Newton Abbot; J. Dunstan, Liskeard, and P. W. Bloye, Plymouth.

The Secretary read a letter from the Performing Animals Defence League asking the Association to support their Bill before Parliament.

It was proposed by the Chairman, and seconded by Mr. Blackwell (Exmouth), that a letter be sent from this association supporting the Bill.

The Secretary then read a letter from Mr. Blackwell (Exmouth), with reference to the fees paid to veterinary surgeons in Court cases, he pointing out that it was a very important matter.

Mr. Blackwell, in his letter, complained that in a recent Assize Court at Exeter, he was paid the sum of 16s. 6d. for a whole day's attendance at Court, and train fare from Exmouth. He had written to the Royal College of Veterinary Surgeons, and the reply received from them was that the Secretary had discussed the matter with the College solicitor, and was informed that that was the correct scale under the 1904 Act.

The members were disgusted with this, and it was proposed by Mr. Wright (Torquay) and seconded

by Mr. BLACKWELL, that a letter of protest be sent to the National Veterinary Medical Association urging them to take the matter up and have veterinary surgeons placed upon the same footing as medical men. This was passed unanimously.

Mr. C. MASSON stated that he had once been taken in in this fashion, and now always, before attending Court, stipulated with his client that no matter what the Court fee was, or who won the case, *his* fee was three guineas, and he invariably got it.

Mr. W. N. WRIGHT stated that he also did the same thing, and had no trouble.

The SECRETARY read a letter from Mr. E. J. Thorburn (Crewkerne), expressing his deep regret at not being able to be present at the meeting on account of severe illness, and that his wife was very disappointed also, and it was unanimously resolved that a letter of sincere sympathy be sent to Mr. Thorburn.

A letter was read from Professor R. J. Linton, R.V. College (Edinburgh), thanking the Association for its kind donation to the College Centenary Fund, and he stated that, as an old member of this Association, he greatly appreciated their action, and wished the Association every success.

The next item on the agenda was to decide on the place of the next meeting. Plymouth was suggested, and Exeter, and on the proposition of Mr. W. N. WRIGHT, seconded by Mr. W. J. BLACKWELL, it was decided to hold the November meeting at Exeter.

THE MILK AND DAIRIES (AMENDMENT ACT), 1922.

Mr. C. MASSON (Torquay) then opened a discussion on the Milk and Dairies (Amendment) Act, 1922, as follows :—

The Milk and Dairies (Amendment) Act, 1922, in my opinion, is a very important one as far as the veterinary surgeons of this country are concerned, and, though there are many clauses in it which take a lot of understanding, I think it is well worth the while of all progressive veterinary surgeons to go deeply into the matter, for, once the Act is in working order—and the sooner the better—it will certainly be for the good of all concerned, namely, the farmer, the retailer, the consumer and the veterinary surgeon.

As all of you are no doubt aware, there are four grades of milk which come under this Order, namely, Certified, Grade A (Tuberculin tested), Grade A, and Pasteurised, and I think it would be a good idea to open the discussion by considering which of these grades is the most practical one from the farmer's and veterinary surgeon's point of view.

Under Section 3 of the Milk and Dairies (Amendment) Act, 1922, the designations "Certified Milk," "Grade A Milk," "Pasteurised Milk," and other similar designations may only be used where a licence has been granted by the Ministry of Health or with its authority.

Licences are required in the case of either Certified, Grade A (Tuberculin tested) or Grade A milk, both by the farmer who produces the milk and by every dealer who sells it.

Licences, expiring annually on the 31st of December, are granted by the appropriate licensing authority, subject to certain conditions and upon certain payments.

Separate licences are required for each district.

I may here briefly state the conditions which apply to the various grades of milk : —

1. *Certified Milk.* The milk must be bottled on the farm. The milk shall be found not to contain more than thirty thousand bacteria per cubic centimetre, nor any *bacillus coli* in a tenth of a cubic centimetre. The milk must not be treated with heat.

2. *Grade A Milk.* The milk shall not contain more than two hundred thousand bacteria per cubic centimetre, nor any *bacillus coli* in a hundredth of a cubic centimetre.

3. *Grade A (Tuberculin tested) Milk.* The conditions shall be those for Grade A milk, and, in addition, the animals must pass the tuberculin test.

4. *Pasteurised Milk.* The milk shall be pasteurised, and shall not contain more than thirty thousand bacteria per cubic centimetre, nor any *bacillus coli* in a tenth of a cubic centimetre.

I do not think we need discuss the last grade of milk.

Probably some of you are aware that recently, in this district, conferences have been held between the local authorities, the producers, and the dairymen, as to the most suitable grade of milk which can be produced to suit all concerned—first at this college, and afterwards at Paignton and Torquay—and, as a result of these conferences, it has been decided by the Torquay Town Council, with the co-operation of some of the more progressive farmers and dairymen in the district, to start the production of Grade A milk—this, in their opinion, being the most practical one; and I hold the same view.

Now, while going about my daily practice, I am continually being asked by my clients what it all means, what alterations are necessary to make the shippons suitable, and what it will cost. I venture to suggest that those of you who are not quite clear about the Order should read it up, as, by so doing, and by having the information at your finger ends, you can enable your client to realise that there is nothing very terrible in the Order, and that, with very little expense to himself, he can adapt his shippons for the production of Grade A milk, with, in my opinion, the natural consequence that his business will increase, and, as the scheme progresses, it will naturally result in more work for the veterinary surgeon.

The chief conditions subject to which licences for producing Grade A milk to farmers are granted are :—

1. The producer shall cause every animal of the herd to be examined once every three months by a veterinary surgeon, and shall produce to the licensing authority, namely, the County Council, or a County Borough Council, the veterinary surgeon's certificate—on a prescribed form—within seven days after the date of the certificate.

2. Where any animal is certified as showing evidence of any disease which is likely to affect the milk injuriously, it shall forthwith be removed from the herd, and the producer shall inform the licensing authority how it has been disposed of, and, if at any time it is shown to the satisfaction of the licensing authority that the tubercle bacillus is contained in the milk, the producer shall take all necessary steps to ascertain which animals are diseased, and to remove them from the herd, and shall inform the

licensing authority how such animals have been disposed of.

I may here say that samples of milk are taken periodically, and are tested bacteriologically by the licensing authority.

3. A suitable system shall be adopted for the marking, for the purposes of identification, of the herd, and a complete register of such animals shall be kept.

4. The herd shall be kept separate from all other animals.

5. The milk shall be produced and treated under such conditions that, on a sample being taken at any time before delivery, the milk shall be found not to contain: First, more than two hundred thousand bacteria per cubic centimetre, nor, second, any *bacillus coli* in one hundredth of a cubic centimetre. At present the regulation with regard to the *bacillus coli* is in abeyance, and is not to come into force until January, 1924.

In other words, this last paragraph entails ordinary cleanliness, such as we would all like to see in every shippon; for example—regular whitewashing, no cobwebs, a gutter behind the cows, plenty of daylight, washing the cows' udders, white clean coats for the milkers, and special small-mouthed milking buckets; it also entails the necessary plant for sterilising the milking utensils; this latter plant can be installed very cheaply, so that if the shippons are at all suitable—and it is surprising how little work will make them suitable—there is very little outlay for the farmer when one comes to total up the advantages which may accrue from the higher price received for his milk, and, should he be a retailer as well as a producer, the advantages are even greater, especially if he has his milk float suitably painted "Grade A Milk," etc.

The regulations for producing Grade A (Tuberculin tested) and Certified milks are the same as for Grade A milk, with one or two additional conditions. It may, therefore, be as well to mention them here, so that, if the members think fit, they can discuss these grades also, and determine which grade of milk they think is the most practical for the farmer and the veterinary surgeon to carry out.

The chief additional conditions for Grade A (Tuberculin tested) and Certified milks are:—

1. The producer shall cause the tuberculin test to be applied to every animal of the herd at intervals of six months, and shall produce to the licensing authority the certificate of the tuberculin test within seven days after the date of the certificate, and shall not permit the injection of tuberculin on any other occasion.

It may be as well to mention here that, in the *Veterinary Record* of June 2nd, one of our colleagues suggested that we should get a written guarantee from the farmer before testing the herd that it has not been subjected to the test within the prescribed period—a very good suggestion.

2. No animal shall be added to the herd unless it has been submitted either by the holder of the licence, or by some other producer of Certified milk, to the tuberculin test within a period of three months next before it is so added.

3. When any animal is certified as showing evidence of any disease which is likely to affect the milk injuriously, or, as reacting to the tuberculin test, it shall forthwith be removed from the herd, or shall not be added to the herd, as the case may be, and, where an animal is so removed on account of any such illness, the producer shall inform the licensing authority how it has been disposed of. This disposal clause may irritate some farmers.

4. A suitable system shall be adopted for the marking for the purposes of identification of the animals of the herd, and a complete register of such animals shall be kept.

5. The herd shall be completely isolated from all other cattle.

Since this Order came into force, another Order has been issued, taking effect from July 1st, in which, with regard to Grade A milk, only the milch cows of the herd need be subjected to veterinary examination and registered.

From the foregoing statement you will see that the regulations for the production of Grade A (Tuberculin tested) and Certified milk are very complex and severe, and not many farmers are likely to take up the production of either of these milks, therefore I propose to go back to the question of Grade A milk, and I will refer to the conditions under which licences are granted to produce it. These are:—

1. The producer shall cause every animal to be examined every three months, etc., by a veterinary surgeon, and the certificate, which the veterinary surgeon must fill up—called Form D.—specifies that an examination of the herd must be made every three months by a member of the Royal College of Veterinary Surgeons who has been nominated for the purpose by the licensing authority (that is, the Ministry of Health, or the County or County Borough Council, as the case may be).

On a producer making an application for a licence to produce Grade A milk, the County Council have to nominate a veterinary surgeon to examine the herd, and, until further notice, the Ministry of Health concur in the nomination of any veterinary surgeon for the time being holding the appointment of Local Veterinary Inspector to the Ministry of Agriculture, or a Veterinary Inspector to a Local Authority under the Diseases of Animals Act—without reference to the Ministry; but if in any other case it is considered desirable to nominate a veterinary surgeon who does not hold either of these appointments, a special request has to be made for the concurrence of the Ministry.

2. The veterinary surgeon must make a careful *clinical* examination of every animal in the herd, and must certify the results of the examination in the form supplied—Form D.

The certificate, including a schedule, must be made out in duplicate—one copy to be given to the owner of the herd or his agent, and the other to be sent to the licensing authority within seven days of the completion of the examination.

The veterinary surgeon's certificate is in the following form:—

Name of owner of the herd.....
Address of farm or premises.....
Post town, county.....
Total number of cows and heifers in the herd.....

I have this day examined the above herd, and, after submitting each animal, separately, to a clinical examina

tion, certify that no animal in the herd is affected with, or shows symptoms indicative of, the following pathological conditions :—

Tuberculosis of the udder, indurated udder, enlargeme t of the supramammary glands, tuberculosis in any form with emaciation, chronic cough with definite clinical symptoms of tuberculosis, anthrax, foot-and-mouth disease, mastitis, abscess of the udder, or retained placenta, with the exception of (here insert number) animals described in the schedule.

Signed .....

Address .....

Date .....

The schedule is drawn up in the following form :—

1st column : Identification mark of animal affected.

2nd column : Pathological condition as specified in the certificate.

3rd column : Degree, very marked, marked, slight.

4th column : General Remarks. Under this heading should be given particulars regarding any animal in the herd affected with a pathological condition which might be of interest to public health, such as lesions of the teats, etc.

This certificate brings forward several points :—

1. Some suitable means for marking the animals for identification. Will the pedigree earclip numbers fill this requirement, or must the herd be marked with a suitable tattoo mark for each animal, or by horn branding ? I suggest that, if the latter method of marking be adopted, some arrangement might be come to with the Milk Recording Society in each district to carry out the tattooing through their district inspectors, and by some special mark, so as not to confuse the cows with the marks adopted by the Society, especially where the cows are not in the Society's book.

2. Coming to the diseases mentioned in the certificate, I see no need to take exception to any except the last, namely, retained placenta. Are we to condemn a cow simply because she has not cleansed, or what are we to do ? We cannot go and cleanse a cow in a herd belonging to a fellow practitioner so that we can pass her. I think this condition ought to give rise to a big discussion to-day.

3. Another point which may be crossing the minds of some of you is : Who pays for the veterinary examination—the farmer or the local authority ? I have written to the Ministry on this point, and their reply is "the farmer." Will the farmer stand the expense ?

4. As this examination has to be carried out in a thorough manner, and each animal examined independently, the point naturally arises, what fee shall we charge for this ? And I think it would be well worth our while to come to some standard charge, as very soon I hope many of us will be carrying it out.

In my district the farmers, now that their cows are lying out, are having their shippons altered, so that, as soon as their cows lie in, in the autumn, the work of having them examined will begin.

Another point is—Who is to examine the shippons and approve them ?

Under the Borough of Torquay regulations, and in most boroughs, under the Dairy, Cowsheds and Milkshops Orders, the following officers make the inspection :—The medical officer of health, the inspector of nuisances, "or any other officer of the council specially authorised by them," may visit for the purpose of inspecting the *cattle* and cowsheds. What do you think of that ?

Before sitting down I would like to say a few words on Grade A (Tuberculin tested) milk, with special reference to the tuberculin test.

The conditions laid down are as follows :—

1. The producer must arrange with a veterinary surgeon nominated by the Ministry to carry out the tests, and to give the certificate and report specified below.

2. The producer must send all such certificates and reports to the Ministry (unless they are sent direct by the veterinary surgeon) within seven days of the date of the test, and, in the case of an animal intended to be added to the herd, before it is so added.

3. The producer must within the same period send a declaration that every animal in the herd which is reported as reacting to the test has been removed.

4. The tests are to be carried out with fresh tuberculin of a satisfactory make. The name of the maker of the tuberculin used and the quantity injected in each case should be stated on the test report sheet, and the actual instructions supplied with the tuberculin used must be adhered to.

5. The temperatures of all animals should be taken on three occasions, at intervals of three hours shortly before the injections are made, and the average of all temperatures within the physiological limits should be noted.

Any animal persistently showing a temperature which is abnormal when compared with this average should not be included in the test, but should be tested as soon as its temperature becomes normal.

No animal which has been injected with tuberculin within the previous three months may be included in the test.

6. The hypodermic and the ophthalmic tests should be applied simultaneously.

7. After the injections the temperatures should be taken every three hours, beginning at the sixth hour, and continuing until the eighteenth hour. If the temperature of an animal has shown little variation, but at the eighteenth hour shows distinct signs of rising, its temperature should be taken again after a further period of three hours.

The result of the eye test should be recorded up to the eighteenth hour.

8. The taking of the temperatures may only be entrusted to an assistant if the assistant acts under the immediate personal supervision of the veterinary surgeon. What does this mean ?

9. A certificate should be given on the official form. The results of each animal should be entered separately, and the description of each animal, including a reference to the identification mark or number.

10. All temperatures, including the average specified above, and all changes in the eye should be reported on the form.

Here, again, there is a certificate to sign and a schedule to fill up.

The certificate is in the following form :—

TUBERCULIN TEST CERTIFICATE.

Certified Milk and Grade "A" (Tuberculin tested) Milk.

Owner of herd.....

Address of farm.....

Date of test.....

Date of last previous test (if any).....

Manufacturer of the tuberculin—

Subcutaneous test.....

Ophthalmic test .....

Date when the tuberculin was supplied.....

Average pre-inoculation temperatures of animals tested...

Number of animals in the herd—cows, heifers, bulls.

Total ... .

Number of animals not tested with tuberculin.....

Number of animals tested.....

Number of animals which passed the tests.....

Number of animals which failed to pass the tests.....

I hereby certify that the tuberculin tests were applied to each of the above animals, that so many of the said animals passed the tests, and that the results of all the tests were as indicated in the report overleaf.

Signed and dated.....

Note 1.—If the temperature of an animal has shown little variation up to the eighteenth hour, but at that hour shows signs of rising, the test is to be recorded up to the twenty-first hour.

Note 2.—The results of the ophthalmic test must be recorded by describing all the ophthalmic disturbances which occur at any time during the test.

TUBERCULIN TEST REPORT.

Name and identification number of animal.....

Subcutaneous Test—

Dose of tuberculin per cubic centimetre.....

Pre-inoculation temperatures—

Six hours before. Three hours before. At injection.

Post-inoculation temperatures—

Sixth hour. Ninth hour. Twelfth hour. Fifteenth hour. Eighteenth hour. Twenty-first hour.

Ophthalmic Test—

Dose of tuberculin, drops.....

Sixth hour. Ninth hour. Twelfth hour. Fifteenth hour. Eighteenth hour.

Now the regulations for the Tuberculin Test should also give rise to a good discussion.

You will remember that the temperatures have to be taken three times shortly before injection at three-hour intervals, and at three-hour intervals after injection, beginning at the sixth hour and continuing until the eighteenth or twenty-first hour; therefore, what is the best period of the day to carry out the tests? It means about thirty hours at the job, and an all-night job at that. Furthermore, the conclusions come to by Mr. J. F. D. Tutt, of Winchester, after close investigation, tend to point out that :—

1. The subcutaneous test, properly applied, is the best.
2. The ophthalmic test is less reliable.
3. The combining of the two tests is apt to lead to error, and is not in accordance with the findings of recent research.
4. That the method of testing should be changed at each test.

On the strength of these conclusions, why do the Ministry demand both tests? I understand this question is receiving attention at present.

Another point we would like to know is—Whose serums are approved by the Ministry? It would be a nice state of affairs supposing one bought fifty doses of tuberculin from Camden Town, and, after carrying out the test, found that the Ministry did not approve of that particular serum. I consider that a list of approved serums and their manufacturers be issued by the Ministry for our guidance.

In continuing the discussion, Mr. MASSON, in reply to Mr. Wright, said it was not necessary for the milk to be cooled.

Mr. W. B. NELDER (Exeter) thought that the farmers would not take up the production of Grade "A" (Tuberculin tested) milk until they were compelled by legislation, or until they were compensated for the loss due to reactors.

Mr. MASSON, in reply, said he quite agreed. That was why he suggested that only Grade "A" milk should be produced—it was the thin end of the wedge, and once farmers got into the way of producing Grade A milk, they would, sooner or later, when the demand came, begin the production of Grade A (Tuberculin tested) Certified milk, and those who were prepared would naturally reap the first benefit.

Mr. CODD, a visitor and a practical farmer, said that Grade A milk sent to London in bottles from the Midlands fetched a penny per quart more. The trouble was chiefly due to the fact that the farmers would not take the trouble to bottle the milk on the farm.

Mr. MASSON replied that with Grade A milk it was not necessary to bottle the milk on the farm; it could be sent to the retailer in non-ventilated and sealed cans.

Mr. CODD: The loss from reactors is another drawback which prevents farmers from going in for Grade A (Tuberculin tested) milk.

Mr. MASSON informed him that at a recent milk conference which he attended, where a practical farmer gave an address on Clean Milk, the farmer said that he could make a profit on his Grade A (Tuberculin tested) milk by charging fourpence a gallon more; twopence of this covered the tuberculin test, and the other twopence covered the cost of bottles, sterilisers, etc., and he contended that if the farmers around Reading could make a profit, and make the twopence a quart cover the losses from tuberculosis in a Shorthorn district, and in a breed notoriously famous as being rotten with tuberculosis, how much easier it ought to be for Devon farmers with South Devon cows, which were very free from the disease. He estimated the numbers of reactors in Shorthorns as 20 per cent. and in South Devons as only 3 per cent.

Mr. BLACKWELL (Exmouth) thought Mr. Masson was rather severe in his estimate in the number of Shorthorn reactors.

Mr. MASSON replied that in one case where he tested a herd of 78 Shorthorns only 16 passed the test.

The CHAIRMAN (Mr. Lansley) suggested that all reactors should be indelibly marked, for, in his opinion, they simply went to some other farm where tubercle-free milk was not produced. He suggested that in all probability out of forty cows around Reading probably thirty-six were tuberculous.

Major SHORT (Torquay), another visitor, asked if there was nothing in the Act with reference to the bulls, as tuberculosis was quite likely to come from them.

Mr. MASSON said that the bulls must be tested also.

Mr. H. K. ROBERTS (Sampford Peverell) agreed with Mr. Masson that Grade A milk was the only possible one at present, both from the farmers' and the veterinary surgeons' point of view, as the farmers could not afford the loss due to reactors with no compensation. He said the Act could not be pressed upon them until there was some rational scheme for compensation.

Mr. STABLEFORTH, Jun., said the bull would only transmit tuberculosis to the cows if the generative organs were affected, as the bull was generally kept in a separate house.

Mr. R. B. NELDER (Exeter) thanked Mr. Masson for his most excellent paper, and enquired if there was a fixed scale of fees for the tuberculin test.

Mr. MASSON stated that there was none at present, but the National Committee had the question under consideration. He hoped the scale of fees would soon be made known, for he anticipated to soon be examining cows for Grade A milk in his district this autumn, where the farmers were at present having their shippons altered while the cows were lying out.

Mr. NELDER further enquired whether the Local Sanitary Inspector could upset the decisions of the veterinary surgeon, as the local sanitary inspector apparently was the person authorised to examine cows and shippons under the Dairies Act.

The CHAIRMAN said it was a pity that the majority of people who purchased the better grades of milk were the rich, and not the poor.

Mr. MASSON remarked that from statistics it was proved, in Reading at least, that as many poor as rich people purchased the Grade A milk. They found it was economy, for, whereas ordinary milk frequently turned sour in a day in summer and two or three days in winter, Grade A milk would keep four days in the summer and a week in the winter.

Mr. STABLEFORTH, Sen., mentioned that Grade A milk had been the cry for a great many years, but he did not think the farmers would stand the expense of re-fitting the shippons, and it would fall on the poor landowner. He further said, with reference to the doping of animals, that he would like any evidence of the same sent to the National Committee, which has this matter under consideration at present. Such evidence would be treated in strict confidence.

Mr. MASSON stated that at a Milk Conference of dairymen and farmers held at the Seale-Hayne College, at which he was present, one of the delegates from Reading stood up, and, in answer to a question with regard ot the tuberculin test, replied that "as he was away from Reading he felt it safe to tell them a secret," which was that "he could guarantee to get all his cows through the tuberculin test." They could take that in any way they chose.

Mr. BLACKWELL was strongly of the opinion that eventually Grade A (Tuberculin tested) milk would be in demand all over the country.

Mr. ROBERTS thought that cleanliness with cows and thorough whitewashing of the stalls were the best preventatives against disease, especially if concrete floors were laid down.

Mr. CODD said concrete floors were not absolutely necessary, but were a great advantage for the production of Grade A milk. Cleanliness of the cows, utensils, and udders were the most important.

The PRINCIPAL of the College (Colonel D. R. Edwardes-Ker, O.B.E.) thought that tuberculin tested milk was worth threepence a gallon more, and stated that milk clean from the start was much better than milk cleansed, or pasteurised milk. He asked whether tuberculosis of cows was the same as tuberculosis of people.

The CHAIRMAN (Mr. Lansley), in replying, said that it was too big a question for him to answer. He answered, in reply to another question, that all tuberculous cows did not give tuberculous milk. He thought the demand for Grade A was increasing, and by perseverance by all interested in the movement would eventually become general.

This closed the discussion.

A letter was then read from the Victoria Veterinary Benevolent Fund, asking that a representative be appointed from this division.

Mr. MASSON proposed that Mr. Stableforth be appointed; this was seconded by Mr. LANSLEY, and carried unanimously.

The next item brought up was a letter from the "National," intimating that they were prepared to send an expert reporter to the meetings on payment of a fee of two guineas and expenses.

Mr. WRIGHT proposed that the present reporter be appointed, but, after discussion, it was eventually decided to let the matter stand over until the next meeting.

Mr. CATTERMULL, one of the lecturers at the college, said he stood up on behalf of the students of the college. They would very much like to have been present at the meeting, but, unfortunately, they were at their examinations all day.

It was proposed and seconded that Mr. Ferris, of Totnes, be appointed a member of the division, and his name will come up for election at the next meeting.

The HON. SECRETARY proposed a vote of thanks to Mr. Masson for his paper, which was seconded by Mr. WRIGHT, and carried with acclamation.

The CHAIRMAN then proposed a vote of thanks to the Principal and Governors of the college for the splendid way in which the members had been treated that day.

The PRINCIPAL suitably replied.

Tea was then served in the library—the ladies being present. At tea, Mr. LANSLEY proposed a hearty vote of thanks to Mrs. Edwardes-Ker, wife of the Principal, for the excellent manner in which she had looked after the ladies, this being carried with loud applause.

(Continued at foot of next page.)

Notes and News.

The Editor will be glad to receive items of professional interest in these columns

NOTICE TO DIVISIONAL SECRETARIES.

The Editorial Committee, wishing to be of assistance to the divisions, and with a view to achieving uniformity in the reports of meetings, and acceleration in their publication in the *Record*, are prepared to send their representative to report their proceedings.

Will Secretaries of divisions, wishing to avail themselves of this offer, forward particulars as to dates, times, and places of meeting to the Editor, 12 Buckingham Palace Road, S.W.1., at least a month prior to such meetings, when the scale of charges will be forwarded to them?

Diary of Events.

Oct. 1st—Veterinary Colleges re-open.
Oct. 3rd—N.V.M.A. Quarterly Meeting of Council and Committee Meetings, 10 Red Lion Square, W.C.
R.C.V.S. Quarterly Meeting.
Oct. 4th—R.C.V.S. Quarterly Meeting.
Oct. 5th—R.C.V.S. Quarterly Meeting.
N.V.M.A. Editorial Committee.
Oct. 11th—Central Division, Annual General Meeting.
Oct. 18th—Probable date of Special Meeting of Council of R.C.V.S.
Southern Counties' Meeting at R.A.V. School, Aldershot.
Oct. 26th—10 Red Lion Square secured for College headquarters, 1853.
Oct. 31st—Changes of address for 1924 Register to be sent to 10 Red Lion Square.

Our representative inaugurated the scheme of divisional meeting reporting, to which attention is drawn above, by a mid-week visit to Swansea. This necessarily brief excursion to a western outpost of association activity revealed the triumph of enthusiasm over geographical difficulties such as handicapped no other division in its endeavour to promote professional unity. The Mid-West and South Wales is a "scattered constituency" indeed, thanks to its Bristol Channel bi-section which demands of its veterinary devotees anything up to a two-hundred mile Severn Tunnel dètour if confrères on the other side of the estuary are to be met.

* * * *

Yet gatherings of no mean numerical proportions are the rule rather than the exception under the genial chairmanship of Mr. Rees, as they were in the presidential days of Mr. Scott. It was unfortunate that South Wales provided one of those exceptions on a former occasion when one of the Cambrian Company's collieries was visited. It appears that mining was stopped for the day and the ponies were brought up for the benefit of less than a score of veterinarians, for whom the management provided a day of outstanding pleasure and instruction, but which, one fears, is scarcely likely to be repeated.

* * * *

The feature of the Swansea meeting (apart from the dissemination of the news that Mr. Pryde Jones, a *quondam* colleague of most, was to safeguard Papyrus against *mal de mer*) was the presence of Mr. Barker, who, having done so much to make a scientific and practical success of the York meeting, did not disdain to give of his very best for his division. Many who witnessed his deft instrumentation at York in connection with sterility, felt that the versatility which produced such entirely efficient dealing with a deceptive case of canker was a rare asset indeed. And all were impressed with the infinitely patient knife and rasp manipulation which revealed as a sole and wall under-run abomination, a condition which more than one experienced practitioner regarded as well on the road to recovery. This state was disclosed and dealt with in the drastic manner demanded, without stocks or mechanical restraint of any kind.

* * * *

Demonstrations such as these are of immense value, and it was obvious from the reluctance with which members yielded to the importunities of pressing time and to secretarial insistence and devoted themselves to the more prosaic duties of the business meeting, that Mr. Barker had full measure of reward for his arduous task in a whole-hearted appreciation of his efforts. Wisely selected demonstrations—and demonstrators—will be a great draw at future meetings of this division, an effect that other divisions would do well to make.

"THE FIELD" AND MR. BUXTON'S APPOINTMENT.

In announcing "with great pleasure" that Mr. J. Basil Buxton, F.R.C.V.S., a member of the Technical Committee of the *Field* Distemper Council, has been appointed to the new Chair of Animal Pathology, founded by the Government at Cambridge, the *Field* of September 20th, says:—"It is particularly satisfactory to us that he was able to accept this post on condition that he need not sacrificè his connection either with our Scientific Committee or with that personal supervision of our kennels for which he is so admirably fitted. This appointment not only confirms the wisdom of the choice which gave him his particular position with us at the beginning of our work, but it assures to Cambridge a professor of tried experience and skill, which will in its turn be largely assisted by the varieties of work which will come before him in his new post. That post has, of course, an importance which our readers will not be slow to appreciate, for it is not confined to that work on dogs which is our own special preoccupation; it

(*Continued from previous page.*)

Mrs. EDWARDES-KER suitably replied.

Mr. BLACKWELL (Exmouth) showed the members an ingenious anti-concussion arrangement for shoeing horses, its composition being of crêpe rubber.

This ended a very enjoyable meeting, the President remarking that they hoped to come back to Seale-Hayne at a later date.

W. P. STABLEFORTH, *Hon. Sec.*

involves the beginning of very important developments for the hundreds of valuable thoroughbreds which are bred and trained so near to Cambridge. We venture to congratulate the Government on the far-sighted policy which has made such an appointment possible at all."

Foot-and-Mouth East and West.

The existence of foot-and-mouth disease was confirmed on Sunday on premises at Whitchurch, near Bristol, and at Old Clee, Grimsby. The Ministry of Agriculture accordingly issued Orders prohibiting the movement of animals in areas within a radius of approximately fifteen miles of the infected premises. The Bristol district includes parts of the counties of Gloucester, Somerset and Wilts., whilst the Grimsby district is wholly in Lincolnshire. The first mentioned area includes Bristol, and the landing of animals thereat either from Canada or Ireland is therefore prohibited for the time being.

It is greatly regretted that the name of Mr. H. H. Truman, of March, Cambs., was inadvertently omitted from the list of contributors to the Buxton Presentation Fund. Mr. Truman's subscription of 10/6 was sent in July.

We are informed by Messrs. Baillière, Tindall and Cox that the price of Captain Hamilton Kirk's book on "Canine Distemper" has been reduced from 10s. 6d. to 7s. 6d. This is entirely in accordance with their present policy of reducing the cost of their publications wherever possible. For instance, General Sir Frederick Smith's "Veterinary Physiology" was recently reduced from 35s. to 25s., and Professor Share Jones' "Surgical Anatomy of the Horse" from £3 6s. 0d., in four volumes, to 31s. 6d. in two volumes.

Anthrax from a Bone.

A prick from a small bone is believed to have set up anthrax, and caused the death of Harry Chaffer, aged fifty, a butcher, of Cotton Street, The Bank, Leeds.

Dr. Herbert Pearson, superintendent of the Seacroft Hospital for Infectious Diseases, stated at the inquest that Chaffer told him that he pricked his back with a small bone when carrying meat into his shop on September 6th. A pimple formed on his neck, and this became worse. A verdict was recorded that death was from anthrax, but there was no evidence to show the cause of infection.

The Cancer Research Fund.

As a result of the appeal for the British Empire Cancer Campaign, nearly £55,000 has now reached the offices of the British Red Cross Society at 19 Berkeley Street, W.1. More than half the total number of subscriptions have been anonymous. The fund at its inception received an anonymous gift of £20,000. There has been also one anonymous gift of £2,000, two of £1,000, three of £500, and many others of smaller amounts, which bring the total of anonymous subscriptions to £28,000. It is indicated with pathetic clearness that a great many of the supporters of the Campaign are sufferers or relatives of sufferers from this great scourge.

Voluntary workers are urgently needed to help forward the collection of the large sum of money required. Collecting cards, books of stamps, pamphlets and leaflets, may be obtained from the British Red Cross Society, 19 Berkeley Street, to the chairman of which Society subscriptions may be sent. Several supporters of the Campaign are setting out to collect a definite sum of money among their friends, an example which it is hoped will be followed by many others who wish to see the work of cancer research advanced.

Correspondence.

Letters to the Editor should reach the Office not later than by the first post on Tuesday morning for insertion in following Saturday's issue.
All correspondence must bear the name and address of the contributor for publication.
The Editor does not hold himself responsible for the opinions of his correspondents.

Royal (Dick) Veterinary College Centenary Fund Bazaar.

To the Editor of the Veterinary Record.

Sir,—Would you be so kind as to grant me a little space in the *Record*, in which to appeal to the lady friends and relations of your readers for some assistance in my effort to obtain goods for the College stall, and also at the same time to reply to the numerous kind enquiries I have received as to the manner in which assistance could be given? Experience has shown that there are many sympathisers who are only too willing to give of their help if they but know just what is required. My personal share in the Stall is to organise a children's section; may I, therefore, beg for gifts of any kind suitable for Christmas presents for children, including clothes of all sorts and sizes, games, toys, dolls, boots, etc., etc. Any contribution, however small, would be gratefully received and may be sent to the address given below, or to the Royal (Dick) Veterinary College, any time *before November 28th*.

As so many of us owe all that we have, and our present happiness and security to Veterinary Science, we should one and all do our utmost to help on so worthy an enterprise.—I am, yours faithfully, Mrs. G. Linton.

16 Hartington Place, Edinburgh.

Sept. 18th, 1923.

Black Welsh Cattle.

To the Editor of the Veterinary Record.

Sir,—After reading the discussion of the Mid-West Division in the *Veterinary Record* about Welsh cattle, I thought it may interest many readers, now that Grade A milk is discussed so much, to have further particulars of the Black Welsh cattle. We often see it in print that they are very free from tuberculosis, and I give the following facts from statistics kept.

I have tested, during the last eight years, 132 bulls of various ages up to eight years old, and only three reacted to the test, and during the last few years I have tested many herds of Pedigree Welsh cows, and the average of reactors is under three per cent. Even when commercial cattle are tested which are not pure bred Black Welsh, it is very rare to have more than five per cent. react, and two years ago I sent a note to about a dozen veterinary surgeons practising amongst the Welsh cattle, asking their opinion, and I got eight answers, and the average percentage of reactors, in their opinion, was under five per cent. I think this fact should be better known amongst veterinary surgeons practising amongst other breeds, particularly if there are many herds with 90 per cent. reactors, as mentioned in the discussion of the Mid-West Society by Mr. Perry. As to their milking capacity these cattle must be taken away from their home environments before they will show what they can do, as most other breeds would die, apart from milking, if kept on the fare that they get at most of the small holdings here, and I have no hesitation in stating that they will compare very favourably, in producing milk at so much per gallon, with any other breed. It is true that few of them give over 1,000 gallons, but a great number give over 900, and some herds of 40 in number give an average of 700 gallons, including cows and heifers officially recorded, and this milk averaging from four to six per cent. of butter fat. That they are fair beef cattle is shown by their Smithfield records, their daily gain of live weight being second only to Herefords there. Perhaps I can do no better than quote the following: "Their greatest point is that they are such small feeders—

three can be kept on the same food as two shorthorns, and I do not hesitate to state that they are the most profitable cattle in Britain as dairy cattle. Their average butter fat from two herds in Carnarvonshire for the whole year was 5·2. During the last 25 years I have milked pedigree and non-pedigree shorthorns, Freisians and Jerseys, and I have never had any cattle so profitable for me as Welsh Black." This is not a testimonial from an enthusiastic Welshman, but is from Mr. C. W. Crompton, Hall Green, Wakefield, who has kept them for the last 10 years.—Yours, etc., G. J. ROBERTS, F.R.C.V.S.

Pwllheli.

The Editor begs to acknowledge the receipt of the following :

Communication from Messrs. R. P. Jones, Ruthin ; J. W. Conchie, Kidderminster, and O. Trevor Williams, Llangefni.

Correspondence (unavoidably held over) from Messrs. J. Brown, and H. Llewelyn Jones.

Clinical communication from Mr. H. J. Kelly.

Mr. W. S. King, M.R.C.V.S., writes to say that the bay four year old Burdett Surprise, to the show successes of which horse reference was recently made in our columns, is not merely in his charge, as was stated, but is owned by him.

Diseases of Animals Acts, 1894 to 1914. Summary of Returns.

Period.	Rabies. Cases Confirmed. Dogs.	Rabies. Cases Confirmed. Other Animals.	Anthrax. Outbreaks confirmed.	Anthrax. Animals attacked.	Foot-and-Mouth Disease. Outbreaks confirmed.	Foot-and-Mouth Disease. Animals slaughtered as diseased or exposed to infection.	Glanders (including Farcy).* Outbreaks reported by the Local Authorities.	Glanders (including Farcy).* Animals attacked.	Parasitic Mange.* Outbreaks reported by the Local Authorities.	Parasitic Mange.* Animals attacked.	Sheep Scab. Outbreaks reported by the Local Authorities.	Swine Fever. Outbreaks confirmed.	Swine Fever. Swine slaughtered as diseased or exposed to infection
GT. BRITAIN.													
Week ended 25th August, 1923	...	...	10	13	...	...	...	...	9	9	3	26	7
Corresponding Week in 1922	...	...	3	5	1	34	...	...	10	10	2	16	11
Corresponding Week in 1921	...	...	16	20	...	...	1	12	23	35	3	17	9
Corresponding Week in 1920	3	...	6	8	1	44	...	...	25	33	1	16	8
Total for 34 weeks, 1923	...	...	475	547	37	1547	4	4	632	907	358	1284	548
Corresponding period in 1922	1	...	354	412	1125	54940	1	1	829	1190	407	807	316
Corresponding period in 1921	22	1	353	456	43	2958	9	28	1727	2659	404	858	296
Corresponding period in 1920	7	...	272	327	70	9561	10	17	2956	4972	291	1393	551
GT. BRITAIN.													
Week ended 1st Sept., 1923	...	...	11	11	3	184	1	3	10	10	2	23	14
Corresponding Week in 1922	...	...	8	8	...	..	1	1	11	12	14	20	6
Corresponding Week in 1921	...	...	10	13	...	...	...	...	18	23	2	15	5
Corresponding Week in 1920	1	...	17	19	2	71	...	...	23	31	3	20	6
Total for 35 weeks, 1923	...	...	486	558	40	1731	5	7	642	917	360	1307	562
Corresponding period in 1922	1	...	362	420	1125	54940	2	2	840	1202	421	827	322
Corresponding period in 1921	22	1	363	469	43	2958	9	28	1745	2682	406	873	301
Corresponding period in 1920	8	...	289	346	72	9632	10	17	2979	5004	294	1413	557

NOTE.—The figures for the current year are approximate only. *Excluding outbreaks in Army horses.

IRELAND.										
Week ended 18th August, 1923	...	...	...	...	...	...	Outbreaks * 1	1	2	6
Corresponding Week in 1922	...	...	...	...	...	...	...	1	5	11
Corresponding Week in 1921	...	...	...	..	...	...	1	12	7	38
Corresponding Week in 1920	...	...	...	...	...	...	...	6	...	...
Total for 33 weeks, 1923	...	...	...	...	...	..	63	90	99	686
Corresponding period in 1922	1	1	...	...	...	...	67	143	159	863
Corresponding period in 1921	...	...	7	77	...	...	66	172	71	384
Corresponding period in 1920	1	1	...	...	1	3	82	180	6	23
IRELAND.										
Week ended 25th August, 1923	...	...	...	...	...	...	Outbreaks ...	1	1	6
Corresponding Week in 1922	...	...	...	...	...	...	...	2	7	49
Corresponding Week in 1921	...	...	...	...	...	...	1	7	7	15
Corresponding Week in 1920	...	...	...	...	...	...	...	7	2	2
Total for 34 weeks, 1923	...	...	...	...	...	...	63	91	100	692
Corresponding period in 1922	1	1	...	...	...	...	67	145	166	912
Corresponding period in 1921	...	...	7	77	...	...	67	179	78	399
Corresponding period in 1920	1	1	...	...	1	3	82	187	8	25

NOTE.—The figures for the current year are approximate only.

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